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## Environmental Awareness in Relation to Awareness towards Social Duty and Some Educational Factors affecting it among Higher Secondary Students

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### Abstract

In this study investigator has tried to measure the relation between environmental awareness and awareness towards social duty among higher secondary students and some educational factors affecting it. Total 608 students were selected from two different boards by using cluster random sampling technique. For collecting data the two tools namely Paryavaran Jagrukta Prashnavali and Samajik Kartavya Jagrukata Prashnavali constructed by investigator was used. Mean, SD, Karl Pearson's product moment correlation, multiple correlations, regression and multiple regressions had been used for analysis of data. Main findings of this study are that there is a positive ( $r = 0.594$ ) relationship between environmental awareness and awareness towards social duty of higher secondary school students. About 35.3% of the environmental awareness scores of the students may be accounted by the awareness towards social duty scores of the higher secondary students. About of 41.0% of environmental awareness scores students may be explained by grade, course of study, type of institution, parent's education and awareness towards social duty scores of students.

**Keywords:** Environmental Awareness, Awareness towards Social Duty, Educational Factors.

### 1. Introduction

There is special importance of trees in the Indian culture. The healthy tradition of conservation of nature is continuously under process from the ancient days through symbol of praying the trees in a different ways. Indian women pray the different type of trees like banyan, mango, basil, pipaal and asoka with keeping fast. Asoka tree is holy in the Indian culture. In Ramacharit Manas there is a famous statement 'taru asoka mam karahu asokaa' given by Sita which clearly shows that the importance of the asoka tree. Its meaning is Oh! Tree asoka! Kindly remove my all troubles.

But now days many activities done by human being like building construction, water exploitation, urbanization, throughout the waste materials, smoke of mil factories make damage to environment in a large scale. Now days we people are not thinking about the impact of these activities done by us against a natural environment. We simply forgot about the prominent statement given by Mahatma Gandhi few decades ago, when environment was not a buzz word is "The earth provides enough to satisfy everyman's need, but not every man's greed" stated by Khoshoo (1995 a). This is the statement with profound social, economic, cultural and ethical ramifications. The main reason behind this environmental hazard is the unsustainable development by the human being.

#### 1.1 Rationalization of the Study

Human being is not only dependent on the physical environment for livelihood, but also in a number of ways they are capable of controlling and influencing the physical environment. Environmental degradation seriously threatens economic and social progress even at the global level. Environmental degradation is often mentioned as the consequence of human negligence on the one hand, but on the other hand it is more often than not is the intentional individual or collective actions that has put economic gains as of utmost importance. Increasing craze for mega cities and high tower buildings without considering the width of the roads and parking areas have been causing further congestion and damages to the environment thereby degrading the environment much faster than economic growth. As such, in the process of economic and infra-structural development, environment has not been given its due respect and has often been sidelined which leads to further degradation of the environment. Environment and economic growth are complimentary for developing countries and competitive for developed countries.

Hence environmental protection has become a continuous crisis of the nation. The complex growth of environmental pressures due to the rapid population growth, mushrooming growth of industrialization and the unprecedented rate of urbanization insists upon the urgent need to pursue economic development at any cost. As sustainable development is the need of the hour, which is possible only by promoting awareness about the need to protect environment the Government has taken several initiatives.

Here investigator is giving some researches related to environmental awareness and social duty which is given below:

Moyer (1977) developed an unconstructive environmental attitude instrument to measure the environmental attitude of the students. Gupta (1986) studied attitude of teachers towards environmental education and he found the majority of teachers showed a favorable attitude towards environmental education. Shahnawaj (1990) studied environmental awareness and environmental attitude of secondary and higher secondary school teachers and students. A comparative study of attitude towards population education and environmental education and family planning of different levels of workers in specific occupations was studied by Singh and Gulzar (1991). Saha (1997) studied environment, social forestry and concluded that there is a need for the environmental education in Indian context. Read and Pongracz (2000) studied public education and awareness rising in UK and concluded that several techniques have been commonly used in Europe and North America to try to motivate residents to participate in all form of waste management. Environmental awareness has been studied with respect to scientific attitude among higher secondary students of Varanasi city (Bharti Anita, 2002). Singh (2005) studied the scientific phenomenon between holistic education and environmental awareness. None of these nobody had tried to conduct the study related to environmental awareness among higher secondary schools and some educational factors affecting it.

Sinha, Malti (1992), studied that to examine the role played by the education in social and occupational mobility after independence. Major finding of this study were more than 80% of educated persons changed their caste-profession and the shift in profession had always been upward. Fatima, Nusrat Jehan (1989), studied the relation between various levels of education and social mobility among women in Bangalore city and concluded that secondary education amongst women had a positive effect on their occupational mobility. Kalaimathi D. Hemalatha and Kumaran D. (2006), studied development and validation of social skills rating scale (SSRS). Social skill implies the selection and exhibition of behavior at appropriate times and in specific situations. Social skills of children were assessed with the help of socio-metric techniques and socio-grams in the past. Singh (2005), conducted a study of scientific phenomenon between holistic education and environmental awareness and concluded that environmental Protection, strategies for sustainable development can do only by improving environmental awareness by holistic approach in education. None of these nobody had tried to conduct the study to measure environmental awareness in relation to awareness towards social duty among higher secondary schools and some educational factors (grade, course of study, type of institution and parent's education) affecting it.

Analyzing the above research studies some questions have appeared in the mind of investigator-

- What is the relationship between environmental awareness and awareness towards social duty?
- Up-to what extent, the environmental awareness may be predicted by some educational factors and awareness towards social duty?

Investigator has effort to find answer of these above questions. On the basis of these relations investigator has tried to given its main causes. Hence the problem "Environmental awareness in relation to awareness towards social duty and some educational factors affecting it among higher secondary students" is worth studying and will go a long way in solving many problems allied with social issues.

### ***1.2 Statement of the problem***

Statement of the problem is "Environmental awareness in relation to awareness towards social duty and some educational factors affecting it among higher secondary students".

### ***1.3 Objectives of the study***

The objectives of the study are

- To predict the environmental awareness among higher secondary students with the help of awareness of social duty.

- To predict the environmental awareness among higher secondary students with the help of awareness of social duty and some educational factors.

#### ***1.4 Research Hypotheses of the Study***

**H<sub>R1</sub>** – Awareness towards social duty affects the environmental awareness among higher secondary students.

**H<sub>R2</sub>** – A subset of educational factors and awareness towards social duty affect the environmental awareness among higher secondary students.

#### ***1.5 Null Hypotheses of the Study***

**H<sub>01</sub>** – There is no significant relationship between the environmental awareness and awareness towards social duty among the higher secondary students.

**H<sub>02</sub>** – There is no significant relationship between the environmental awareness, awareness towards social duty and some educational factors among the higher secondary students.

#### ***1.6 Delimitations of the Study***

Following are the delimitations of the present study

- Population of the present study consists of higher secondary schools of Varanasi city.
- The study has been conducted on 608 students only.
- All the institutions which have been selected into this study are recognized by C.B.S.E. & U.P. Board of higher secondary school.

### **2. Method of the Study**

Descriptive survey method has been used as a method study.

#### ***2.1 Population of the Study***

All the students belong to C.B.S.E. and U.P. Board of Varanasi city was taken as a population.

#### ***2.2 Sample and Sampling Technique***

A sample is any group drawn from a population. A sample is a small proportion of a population that is selected for observation and analysis (Best and Kahn, 2008, P.13). In the present study, a random sampling technique was used to select the sample. The sample consisted of total 608 students. The variable-wise distributions of the sample are presented in the table 1.

#### ***2.3 Tool***

The tools used in the present study were Paryavaran Jagrukata Prashnavali and Samajik Kartavya Jagrukata Prashnavali which was developed by the investigator himself. Paryavaran Jagrukata Prashnavali contains total 37 items including 13 positively & 24 negatively worded were used. By Split-Half Method reliability of this tool is 0.76 and by K-R Method is 0.72 and validity is 0.69. Samajik Kartavya Jagrukata Prashnavali contains total 43 items including 22 positively & 21 negatively worded were used. By Split-Half Method reliability of this tool is 0.84 and by K-R Method is 0.82 and content validity was measured.

#### ***2.4 Data Collection and Statistical Strategy***

By direct administration of the test data were collected from the students of above four colleges by investigator. The obtained data were analyzed using mean, SD, Karl Pearson's product moment correlation, multiple correlations, regression and multiple regressions.

### **3. Analysis and Discussion**

The data have been analyzed by SPSS Package (PASW Statistics Processor 17<sup>th</sup> version) and interpretation of data is given below. The mean score of environmental awareness of sample was found to be 25.34, which indicates average level of environmental awareness. 49.80% of the total students' scored below average and 50.20% of the total students' scored above average (see in figure 1). The mean score of awareness towards social duty of sample was

found to be 32.20, which indicates high level of awareness towards social duty. 45.43% of the total students' scored below average and 54.57% of the total students' scored above average.

### **3.1 Effect of Awareness towards Social Duty on Environmental awareness**

Correlation and regression analysis was performed to assess the combined effect of independent variable awareness towards social duty on the dependent variable i.e. environmental awareness. The results are described in the tables 2.

The correlation coefficient of dependent variable environmental awareness with independent variables i.e. awareness towards social duty is 0.594 which is significant at 0.05 level of significance.

The analysis of regression (in the table 3) indicates that independent variable i.e. awareness towards social duty in least square sense in the regression equation do in fact account for 35.3% ( $r = 0.594$ ,  $r^2 = 0.353$ ) of dependent or predicted variable i.e. environmental awareness. It is significant at 0.05 level of significance. Therefore the null hypothesis that is there is no relationship between dependent variable environmental awareness and independent variables i.e. awareness towards social duty is rejected at 0.05 level of significance.

The value of 0.353 of  $r$  square i.e.  $r^2$  in the table indicates that 35.3% of dependent variable i.e. environmental awareness may be elucidated by the independent variables i.e. awareness towards social duty. Therefore remaining 64.7% may be attributing to others variables.

The regression equation to predict environmental awareness is given by the equation in the form:

$$Y = 8.508 + 0.523X$$

Where,

Y = Predicted Value of Environmental awareness

X = Awareness towards Social Duty

### **3.2 Effect of Awareness towards Social Duty and Educational Variables on Environmental awareness**

Correlation and regression analysis was performed to assess the combined effect of independent variables like awareness towards social duty, grade, course of study, type of institution and parent's education on the dependent variable i.e. environmental awareness. The results are described in the tables 4.

The multiple correlation coefficient of dependent variable environmental awareness with independent variables i.e. awareness towards social duty, grade, course of study, type of institution and parent's education 0.640 which is significant at 0.05 level of significance.

The analysis of multiple regression (in the tables 5) indicates that five independent variables  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ , and  $X_5$  combined in least square sense in the multiple equation do in fact account for 41.0% ( $R = 0.640$ ,  $R^2 = 41.0$ ) of dependent or predicted variable i.e. environmental awareness. It is significant at 0.05 level of significance. Therefore the null hypothesis that is there is no relationship between environmental awareness and independent variables i.e. awareness towards social duty, grade, course of study, type of institution and parent's education is rejected at 0.05 level of significance.

The value of 41.0 of multiple  $R$  square i.e.  $R^2$  in the table indicates that 41.0% of dependent variable i.e. environmental awareness may be elucidated by the independent variables i.e. awareness towards social duty, grade, course of study, type of institution and parent's education. Therefore remaining 59.0% may be attributing to others variables.

The scores of environmental awareness of students may be predicted by the regression equation given below:

$$Y = 9.138 + 0.478X_1 + 0.070X_2 + 2.033X_3 - 1.311X_4 - 0.112X_5$$

Where,

Y = Predicted Value of Environmental Awareness Score

$X_1$  = Awareness towards Social Duty

$X_2$  = Grade

$X_3$  = Course of Study

X<sub>4</sub> = Type of Institution

X<sub>5</sub> = Parent's Education

### 3.3 Findings and Conclusion of the Study

On the basis of the above findings, it may be concluded that there is a positive ( $r = 0.594$ ) relationship between environmental awareness and awareness towards social duty of higher secondary school students. This means that students with better awareness towards social duty are more aware towards environmental awareness and vice-versa.

About 35.3% of the environmental awareness scores of the students may be accounted by the awareness towards social duty scores of the higher secondary students.

About of 41.0% of environmental awareness scores students may be explained by grade, course of study, type of institution, parent's education and awareness towards social duty scores of students.

It may also be concluded that besides awareness of social duty some other educational, demographic and psycho-social variables may be important correlates of environmental awareness.

### 3.4 Educational Implication

This study reveals that about 35.3% of the environmental awareness scores of the students may be accounted by the awareness towards social duty scores of the higher secondary students. This study may be helpful for policy maker to give more important about the awareness towards social duty in the subject of civics books for higher secondary students. The involvement and identification of the student with a field study based on affective development i.e., feelings, attitudes and values should be made. In order to help children's grow in knowledge, skills and values, attitudes and awareness relevant to environment's teacher and sociologist is expected to be not only dispenser of information and knowledge, but also managers to teaching learning situations.

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## Notes

Table 1 variable-wise distributions of the sample

Variable	Group of students	Total
Grade	11 <sup>th</sup>	299
	12 <sup>th</sup>	309
Course of Study	Arts	279
	Science	329
Type of Institution	CBSE	332
	UP Board	276
Parent's Education	Illiterate	6
	Literate	43
	High School	60
	Intermediate	143
	Under Graduate	147
	Post Graduate	167
	Research	42

Table 2: Correlation Matrix among Dependent and Independent Variable for Total Sample (N=608)

Mean	SD	Variables	Y	X
25.3438	5.17744	Y	1.000	0.594
32.1957	5.88351	X	0.594	1.000

Where, Y = Score of Environmental Awareness  
X = Score of Awareness towards Social Duty

Table 3: Results of Regression Analysis

Dependent Variable Y	r	r <sup>2</sup>	Constant 8.508	t	Level of Significance
Independent Variable X	0.594	0.353	Regression Coefficient 0.523	18.187	Significant at 0.05 level

Where,  
Y = Score of Environmental Awareness  
X = Score of Awareness towards Social Duty  
r = Correlation coefficient between X and Y  
r<sup>2</sup> = Coefficient of determination

Table 4: Inter Correlation Matrix among Variables for Total Sample (N=608)

Mean	SD	Variables	Y	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>
25.3438	5.17744	Y	1.000	0.594	0.064	0.335	-0.190	0.117
32.1957	5.88351	X <sub>1</sub>	0.594	1.000	0.146	0.226	-0.071	0.128
1.5099	0.50031	X <sub>2</sub>	0.064	0.146	1.000	-0.068	0.075	-0.009
1.5395	0.49885	X <sub>3</sub>	0.335	0.226	-0.068	1.000	-0.178	0.196
1.4539	0.49828	X <sub>4</sub>	-0.190	-0.071	0.075	-0.178	1.000	-0.309
4.7286	1.38015	X <sub>5</sub>	0.117	0.128	-0.009	0.196	-0.309	1.000
Multiple Correlation Coefficient (R) = 0.640								

Where,  
Y = Score of Environmental awareness  
X<sub>1</sub> = Score of Awareness towards Social Duty  
X<sub>2</sub> = Grade  
X<sub>3</sub> = Course of Study  
X<sub>4</sub> = Type of Institution  
X<sub>5</sub> = Parent's Education

Table 5: Results of Multiple Regression Analysis

Dependent Variable	R	R <sup>2</sup>	Constant	K	N-K-1	F	Level of Significance
Y	0.640	0.410	9.138	5	602	83.556	Significant at 0.05 level

Independent Variables	r	Partial r	Regression Coefficient		df	t-value	Level of Significance
X <sub>1</sub>	0.594	0.561	0.478		602	16.611	Significant at 0.05 level
X <sub>2</sub>	0.064	0.009	0.070		602	0.211	
X <sub>3</sub>	0.335	0.235	2.033		602	5.932	
X <sub>4</sub>	-0.190	-0.153	-1.311		602	-3.792	
X <sub>5</sub>	0.117	-0.036	-0.112		602	-0.891	

Where,

Y = Score of Environmental awareness

X<sub>1</sub> = Score of Awareness towards Social Duty

X<sub>2</sub> = Grade

X<sub>3</sub> = Course of Study

X<sub>4</sub> = Type of Institution

X<sub>5</sub> = Parent's Education

r = Correlation coefficient between X and Y

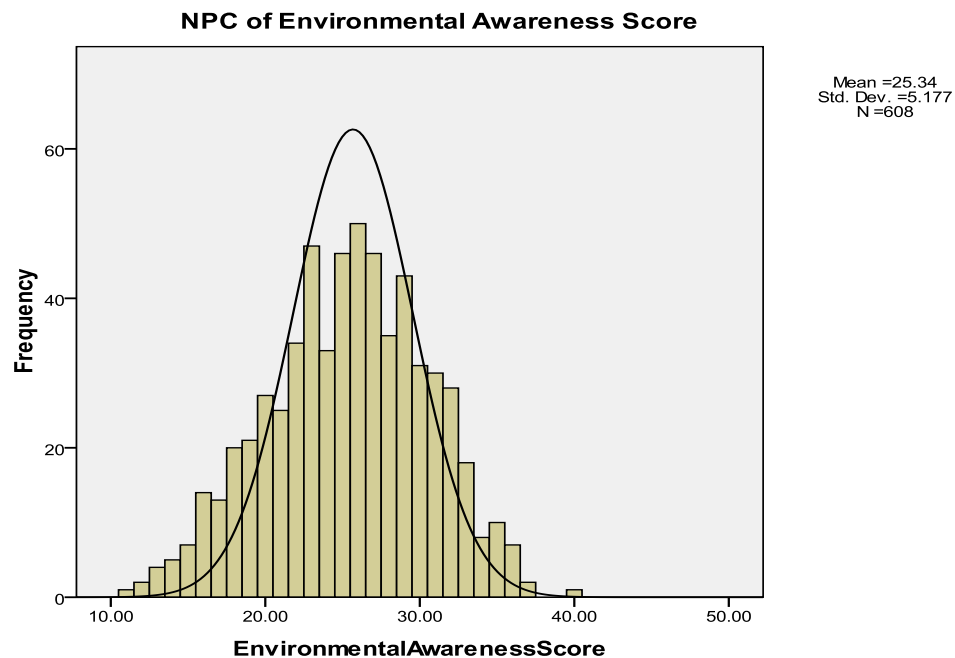
R = Multiple Correlation Coefficient

R<sup>2</sup> = Coefficient of Multiple Determination

N = Sample Size

K = Total Number of Group

Figure 1





The distribution of the environmental awareness score was found to be nearly normal with mean of 25.3438, median of 25.5833, mode 26 and standard deviation of 5.17744. Skewness of distribution of the environmental awareness score was found – 0.164 and Kurtosis was found – 0.382. The mean score of environmental awareness of sample was found to be 25.34, which indicates average level of environmental awareness because of 49.80% of the total students' scored below average and 49.20% of the total students' scored above average. The Normal Probability curve of environmental awareness score is given in the above figure 1.

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